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| 10/528,956 | 05/05/2005 | Gerhard Oberhoffner | 14603-013US1 P2002,0800 U | 8758 |
| 26161 | 7590 | 09/21/2007 | EXAMINER | |
| FISH & RICHARDSON PC | | | GAMI, TEJAL | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/528,956 | Applicant(s) OBERHOFFNER ET AL. | |
| | Examiner Tejal J. Gami | Art Unit 2121 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>07/28/2005; 03/22/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to because of the character of lines and numbers. The lines are not uniformly thick and well defined, clean, durable, and black (i.e., poor line quality) for Figures 1, 2a, and 2b. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hyatt (U.S. Patent Number: 5,339,275).

As to independent claim 1, Hyatt discloses a controller (see Col. 48, Lines 18-33) comprising:

a control circuit (e.g., circuit 996) (see Figure 9) comprising:

a forward path that includes an input and an output (see Col. 19, Lines 35-43);

a feedback path coupled to the output and to the input (see Col. 19, Lines 35-43); and

a sensor (e.g., transducer) (see Col. 116, Lines 56-61), which is between the input and the output, the sensor generating a sensor signal (e.g., magnetostrictive signals) (see Col. 116, Lines 56-61);

Art Unit: 2121

an error signal generator that generates an error signal and that provides the error signal to the control circuit (see Col. 92, Line 59 to Col. 93, Line17), wherein the forward path generates an output signal based on the sensor signal and the error signal (see Col. 92, Line 59 to Col. 93, Line17), the output signal being sent along the feedback path to the input of the forward path (see Col. 92, Line 59 to Col. 93, Line17); and

a detector (e.g., detectors 643 and 645) that obtains an intermediate signal from the forward path between the input and the output, the detector generating a control signal (see Col. 82, Lines 34-44);

wherein the forward path comprises a control device that limits the output signal to a predetermined value (see Col. 99, Lines 36-43), the detector (e.g., detectors 643 and 645) controlling the control device using the control signal (see Col. 82, Lines 34-44).

As to independent claim 8, Hyatt discloses a method of operating a controller (see Col. 48, Lines 18-33) comprised of:

a forward path that includes an input and an output (see Col. 19, Lines 35-43);

a feedback path coupled to the output and to the input (see Col. 19, Lines 35-43);

and

a sensor (e.g., transducer) (see Col. 116, Lines 56-61), which is between the input and the output, the sensor generating a sensor signal (e.g., magnetostrictive signals) (see Col. 116, Lines 56-61), the forward path generating an output signal based on the sensor signal (see Col. 19, Lines 35-43), the output signal being applied to the

Art Unit: 2121

input of the forward path via the feedback path (see Col. 19, Lines 35-43);

wherein the method comprises:

- obtaining an intermediate signal from the forward path between the input and the output (see Col. 19, Lines 35-43);

- generating a comparison (e.g., if) signal by comparing the intermediate signal to a stored measurement signal (e.g., time delay) (see Col. 19, Lines 35-43);

- generating a control signal (e.g., feedback or feedforward) based on the comparison signal (see Col. 19, Lines 35-43); and

- applying the control signal to a control device in the forward path (see Col. 19, Lines 35-43), the control device limiting the output signal to a predetermined value in response to the control signal (see Col. 99, Lines 36-43).

As to independent claim 16, Hyatt discloses a controller (see Col. 48, Lines 18-

33) comprising:

- a control circuit (e.g., circuit 996) (see Figure 9) comprising:

- a forward path that includes an input and an output (see Col. 19, Lines 35-43);

- a feedback path coupled to the output and to the input (see Col. 19, Lines 35-43); and

- a sensor (e.g., transducer) (see Col. 116, Lines 56-61), which between the input and the output, the sensor generating a sensor signal based on an input signal applied to the input (e.g., magnetostrictive signals) (see Col. 116, Lines

Art Unit: 2121

56-61), wherein the forward path generates an output signal based on the sensor signal (see Col. 19, Lines 35-43), the output signal being sent along the feedback path to the input of the forward path (see Col. 19, Lines 35-43); and

a detector (e.g., detectors 643 and 645) that obtains an intermediate signal from the forward path between the input and the output, the detector generating a control signal using the intermediate signal (see Col. 82, Lines 34-44);

wherein the forward path comprises a control device that limits the output signal to a predetermined value (see Col. 99, Lines 36-43), the detector (e.g., detectors 643 and 645) controlling the control device using the control signal (see Col. 82, Lines 34-44).

As to dependent claim 2, Hyatt teaches the controller of claim 1, wherein the detector (e.g., detectors 643 and 645) (see Col. 82, Lines 34-44) comprises:

a storage device (e.g., memory) that stores a measurement signal (see Col. 76, Lines 36-41); and

a comparator (e.g., comparator 617) that compares the intermediate signal to the measurement signal and that outputs a comparator signal (see Col. 23, Lines 36-37).

As to dependent claim 3, Hyatt teaches the controller of claim 2, wherein the detector (e.g., detectors 643 and 645) (see Col. 82, Lines 34-44) further comprises:

decision logic (e.g., comparison logic) that receives the comparator (e.g., comparator 617) signal and that controls the control device in accordance with the comparator signal (see Col. 88, Lines 48-68).

As to dependent claim 4, Hyatt teaches the controller of claim 1, wherein the control device comprises a clamp circuit (see Col. 82, Lines 35-44).

As to dependent claim 5, Hyatt teaches the controller of claim 2, wherein the comparator comprises at least one of a signal level comparator and a signal sign comparator (see Col. 23, Lines 36-64).

As to dependent claim 6, Hyatt teaches the controller of claim 1, further comprising:

a time signal generator that generates a time signal output, wherein the error signal generator generates the error signal based on the time signal output (see Col. 87, Lines 56-62).

As to dependent claim 7, Hyatt teaches the controller of claim 1, wherein the sensor comprises a magnetoresistive sensor (see Col. 116, Lines 56-61).

As to dependent claim 9, Hyatt teaches the method of claim 8, wherein the measurement signal is stored in a storage device, and comparing is performed using a comparator (see Col. 46, Lines 4-7).

As to dependent claim 10, Hyatt teaches the method of claim 8, wherein the control signal is generated via decision logic (e.g., comparison logic), the decision logic being controlled by the comparison signal (see Col. 88, Lines 48-68), the decision logic generating the control signal if a predetermined criterion is satisfied (see Col. 99, Lines 36-43).

As to dependent claim 11, Hyatt teaches the method of claim 9, wherein the comparator comprises at least one of a signal sign comparator and a signal level comparator (see Col. 23, Lines 36-64).

As to dependent claim 12, Hyatt teaches the method of claim 10, further comprising:

generating an error signal based on an output of a time signal generator and an output of the decision logic (see Col. 87, Lines 56-62); and

applying the error signal to the forward path, the intermediate signal being based on both the sensor signal and the error signal (see Col. 19, Lines 35-43).

As to dependent claim 13, Hyatt teaches the method of claim 1, wherein the control signal comprise a signal output of the detector (see Col. 82, Lines 34-44).

As to dependent claim 14, Hyatt teaches the controller of claim 1, wherein the sensor generates the sensor signal based on one or more input signals applied to the input of the forward path (see Col. 19, Lines 35-43).

As to dependent claim 15, Hyatt teaches the method of claim 8, wherein the sensor generates the sensor signal based on one or more input signals applied to the input of the forward path (see Col. 19, Lines 35-43).

As to dependent claim 17, Hyatt teaches the controller of claim 16, wherein the detector (e.g., detectors 643 and 645) (see Col. 82, Lines 34-44) comprises:

a storage device (e.g., memory) that stores a measurement signal (see Col. 76, Lines 36-41); and

a comparator (e.g., comparator 617) that compares the intermediate signal to the measurement signal and that outputs a comparator signal (see Col. 23, Lines 36-37).

As to dependent claim 18, Hyatt teaches the controller of claim 17, wherein the detector (e.g., detectors 643 and 645) (see Col. 82, Lines 34-44) further comprises:

decision logic (e.g., comparison logic) that receives the comparator (e.g., comparator 617) signal and that controls the control device in accordance with the comparator signal (see Col. 88, Lines 48-68).

As to dependent claim 19, Hyatt teaches the controller of claim 16, wherein the control device comprises a clamp circuit (see Col. 82, Lines 35-44).

As to dependent claim 20, Hyatt teaches the controller of claim 17, wherein the comparator comprises at least one of a signal level comparator and a signal sign comparator (see Col. 23, Lines 36-64).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Klaassen et al. (U.S. Patent Number 5,818,656) teaches circuitry for correction of thermal transients in the analog signal from a magnetoresistive sensor.

Jove et al. (U.S. Patent Number 4,879,610) teaches protective circuit for a magnetoresistive element.

Art Unit: 2121

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tejal J. Gami whose telephone number is (571) 270-1035. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on (571) 272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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